

Chapter 1 -- INTRODUCTION

PURPOSE OF THE REPORT

The Groundwater Coordinating Council (GCC) is required by s. 15.347, Wis. Stats., to prepare a report which "summarizes the operations and activities of the council..., describes the state of the groundwater resource and its management and sets forth the recommendations of the council. The annual report shall include a description of the current groundwater quality of the state, an assessment of groundwater management programs, information on the implementation of ch. 160, Wis. Stats., and a list and description of current and anticipated groundwater problems." This report is due each August. The purpose of this report is to fulfill this requirement for fiscal year 2006 (FY 06).

The activities of the Council and its subcommittees, including coordination of groundwater monitoring and research programs, are described in the chapter titled *Groundwater Coordination*. The chapter *Summary of Agency Groundwater Activities* describes groundwater management programs and implementation of ch. 160, Wis. Stats., by the individual state agencies in FY 06. *Condition of the Groundwater Resource* provides an assessment of Wisconsin's groundwater quality and quantity, as well as current and anticipated groundwater problems. The *Benefits from Monitoring and Research Projects* chapter describes how research and monitoring findings are used to better manage groundwater resources in Wisconsin. The recommendations of the Council are contained in *Future Directions for Groundwater Protection*.

SUMMARY OF WISCONSIN'S GROUNDWATER LEGISLATION

1983 Wisconsin Act 410, Wisconsin's Comprehensive Groundwater Protection Act

Wisconsin has a long history of groundwater protection. The first major milestone in this effort was adoption and implementation of 1983 Wisconsin Act 410, Wisconsin's Comprehensive Groundwater Protection Act, which was signed into law on May 4, 1984. The law expanded Wisconsin's legal, organizational, and financial capacity for controlling groundwater pollution. 1983 Wisconsin Act 410 created Chapter 160, Wisconsin Statutes, which serves as the backbone of Wisconsin's program. Chapter 160 provides a multi-agency comprehensive regulatory approach, using two-tiered numerical standards, based on the premise that all groundwater aquifers in Wisconsin are entitled to equal protection. There are a number of major components to Wisconsin's groundwater quality protection program:

- 1) Standards. Under chapter 160, Wis. Stats., the Department of Natural Resources (DNR) must establish state groundwater quality standards based on recommendations from the Department of Health and Family Services (DHFS). Standard setting is a continuing process based on a priority list of substances detected in groundwater or having a high possibility of being detected, established by the DNR in conjunction with other state agencies. The state groundwater standards are contained in chapter NR 140, Wisconsin Administrative Code. For each substance there is an enforcement standard (ES) which determines when a violation has occurred and a preventive action limit (PAL) which is set at a percentage of the ES. The PAL serves as a trigger for possible remedial action.
- 2) Regulatory Programs. Once groundwater quality standards are established, all state agencies must manage their regulatory programs to comply. Each state regulatory agency must promulgate rules to assure that the groundwater standards are met and to require appropriate

responses when the standards are not met. The state regulatory agencies are the DNR (solid and hazardous waste, industrial and municipal wastewater, remediation and redevelopment, wetlands and water supply); the Department of Commerce (private sewage systems, petroleum product storage tanks and petroleum environmental clean-up fund); the Department of Agriculture, Trade and Consumer Protection (DATCP) (pesticide use and storage and fertilizer storage); and the Department of Transportation (DOT) (salt storage).

- 3) Aquifer Classification. One of the most important features of Wisconsin's groundwater law is an item that was omitted. When Wisconsin was debating the groundwater protection legislation, the U. S. Environmental Protection Agency (EPA) tried to develop a nationwide groundwater approach. A keystone of EPA's proposal was aquifer classification - a scheme whereby each aquifer would be classified according to its potential use, value or vulnerability, and then would be protected to that classification level. This entails "writing off" certain aquifers as industrial aquifers not entitled to protection and never again usable for human water supply. Wisconsin said "no" to aquifer classification. The philosophical underpinning of Wisconsin's groundwater law is the belief that all groundwater in Wisconsin must be protected equally to assure that it can be used for people to drink today and in the future.
- 4) Monitoring and Data Management. At the time the groundwater legislation was created, there was concern that Wisconsin needed a groundwater monitoring program to determine whether the groundwater standards were being met. Therefore, a groundwater monitoring program was created under s. 160.27, Wis. Stats. Money from the Groundwater Account of the Environmental Fund has been used for problem-assessment monitoring, regulatory monitoring, at-risk monitoring, and management-practice monitoring, as well as establishment of a data management system for collection and management of the groundwater data.
- 5) Research. Although all state agencies must comply with the groundwater standards, the processes by which groundwater becomes contaminated, the technology for cleanup, the mechanisms to prevent contamination, and the environmental and health effects of the contamination are often not well understood. In addition, the basic data on geology, soils, and groundwater hydrology is often not available. The UWS and the state agencies have recognized that additional efforts in these research areas are badly needed. The Governor and the Legislature included a new groundwater research appropriation for the UWS beginning with the 1989-1991 biennial budget. Since 1992, the UWS, DATCP, DNR and Commerce have participated in a joint solicitation for groundwater-related research and monitoring proposals.
- 6) Coordination. In establishing the groundwater law, the Legislature recognized that management of the state's groundwater resources was a responsibility divided among a number of state agencies. Therefore, the GCC was created to advise and assist state agencies in the coordination of non-regulatory programs and the exchange of information related to groundwater. The Council has been meeting since 1984.
- 7) Local Groundwater Management. The Groundwater Protection Act clarified the powers and responsibilities of local governments to protect groundwater in partnership and consistent with state law.
 - a. Zoning authority for cities, villages, towns and counties was expanded to "encourage the protection of groundwater."

- b. Counties can adopt ordinances regulating disposal of septage on land (consistent with DNR requirements); cities, villages, or towns may do so, if the county does not.
- c. Counties can regulate (under DNR supervision) well construction and pump installation for certain private wells.
- d. Property assessors must consider the time and expense of repairing or replacing a contaminated well or water supply when assessing the market value of real property; they must consider the "environmental impairment" of the property value due to the presence of a solid or hazardous waste disposal facility.

Wisconsin's Groundwater Protection Act, 2003 Wisconsin Act 310

After several years of discussion on groundwater quantity issues in the state, Governor Doyle issued a challenge to legislators on Earth Day 2003 to have groundwater quantity legislation for him to sign on Earth Day 2004. Senator Neal Kedzie and Rep. DuWayne Johnsrud took up this challenge and convened a group of stakeholders to draft legislation. In March of 2004, a bill was passed in both houses with only one dissenting vote.

On Earth Day, April 22, 2004, Governor Doyle signed a new groundwater protection law, 2003 Wisconsin Act 310, that expands the State's authority to consider environmental impacts of high capacity wells and institutes a framework for addressing water quantity issues in rapidly growing areas of the state.¹ This legislation recognizes the link between surface water and groundwater, and that all wells have an impact on groundwater quality and quantity. The law applies many principles of adaptive management, allowing for changes in the regulation of high capacity wells as relevant information becomes available or groundwater conditions change.

Major components of the legislation include:

1) *Tracking well construction and water use.* As of May 1st, 2005, well owners are required to obtain approval of a high capacity well (pumping more than 100,000 gallons per day) by the DNR prior to construction, pay a fee of \$500, and submit an annual pumping report to DNR. For any new well that is not a high capacity well, the owner must notify DNR of the well location prior to construction and pay a fee of \$50. The fees directly support the administration of this Act, including tracking well construction, review of high capacity well applications, and collection of groundwater data. In addition, fees will support increased inspections and enforcement of well construction activities, helping to ensure a safe drinking water supply. The law requires all high capacity well owners to report water use on an annual basis, including ones with existing approvals. Previously, only municipal water supply wells were required to submit pumping reports, along with some high capacity wells that required reporting as part of their approval. The collection of this information will assist in evaluating proposed new wells, monitoring approval conditions, identifying trends, calibrating groundwater flow models, and improving water use estimates, all contributing to better understanding and management of groundwater resources.

2) *Expanded regulation of high capacity wells.* The Act requires DNR to undertake an environmental review (under ch. NR 150, Wis. Adm. Code), for the following proposed high capacity wells:

¹ More details can be found at the Wisconsin State Legislature website:

Text of Act 310: <http://www.legis.state.wi.us/2003/data/acts/03Act310.pdf>

Legislative Council memo: http://www.legis.state.wi.us/lc/act_memo/2003/act310-ab926.pdf

- Wells located in a “groundwater protection area” (an area within 1,200 feet of an Outstanding or Exceptional Resource Water or any Class I, II, or III trout stream).
- Wells that may have a significant environmental impact on a spring with a flow of at least one cubic foot per second for at least 80% of the time.
- Wells where more than 95% of the amount of water withdrawn will be lost from the basin.

In these cases, DNR may deny or limit an approval to assure that these wells do not cause significant environmental impact. There are also protections and exceptions for public water utility wells. For example, the DNR must weigh the public health and safety benefits of a proposed well in a groundwater protection area or near a spring if it is to be used for a public water supply. In these cases, the DNR must balance the well’s environmental impact and its public health and safety benefits. Some of the criteria that might be used for this “balance test” include provisions for water conservation, appropriate use (drinking water vs. lawn watering or car washing), and long range water supply planning. The DNR must also ensure that a public utility’s water supply is not impaired by another high capacity well, maintaining a long-standing requirement from previous statutes.

3) *Designation of groundwater management areas.* The Act directs the DNR to establish two groundwater management areas in Southeastern Wisconsin and the Lower Fox River Valley. These areas will include Waukesha and Brown Counties, and surrounding cities, villages and towns where the water level of the deep sandstone aquifer has been drawn down more than 150 feet since pre-development. In the Lower Fox River Valley, this could include portions of Outagamie and Calumet Counties, while in Southeastern Wisconsin it could include Kenosha, Racine, Milwaukee, and Ozaukee Counties, and portions of Washington and Walworth Counties. The intention of the groundwater management area is to encourage a coordinated management strategy among the state, local government units, regional planning commissions, and public and private users of groundwater to address problems caused by over-pumping of the deep aquifer, including increased levels of radium, arsenic and salinity. The DNR will assist local government units and regional planning commissions in those areas as they undertake research and planning related to groundwater management.

4) *Creation of a Groundwater Advisory Committee.* The Act establishes a Groundwater Advisory Committee. The Committee is to make recommendations regarding:

- the regulation of wells in groundwater protection areas, that have a water loss of 95 percent or more, or that have a significant environmental impact on a spring;
- the definition of springs;
- adaptive management approaches;
- the potential for the use of general permits; and
- factors to be considered in determining whether a high capacity well causes significant environmental impact.

The Act also directs the Groundwater Advisory Committee (GAC) to recommend legislation that addresses the management of groundwater within groundwater management areas and any other areas of the state where a coordinated strategy is needed. The Committee may identify other parts of the state that should be designated as groundwater management areas, and will recommend how and when this designation may be removed. The Committee is to issue reports to the legislature no later than December 31, 2006 regarding groundwater management areas, and December 31, 2007 regarding its review of the implementation of the new regulations. If the committee fails to submit these reports, the DNR may adopt rules to address management of groundwater in the groundwater management areas.

2006 GCC Report to the Legislature

In the Spring of 2005, GAC members were appointed by the Governor and Legislature to represent municipal, environmental, agricultural and industrial interests. The Groundwater Advisory Committee has met every two months from April 2005 through June 2006 and has made significant progress on groundwater management area issues. The DNR received appropriations and positions to begin implementing the new legislation in the 2005-2007 biennial budget and hired five staff to implement the new law in FY 06. The GCC will track progress of the implementation and provide assistance on education, research, monitoring, planning, and data management needs related to the new legislation.

